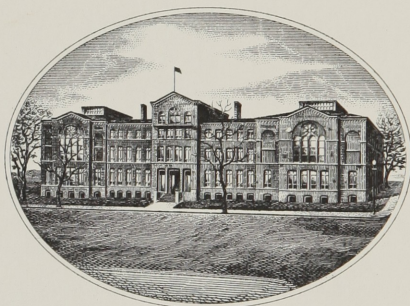
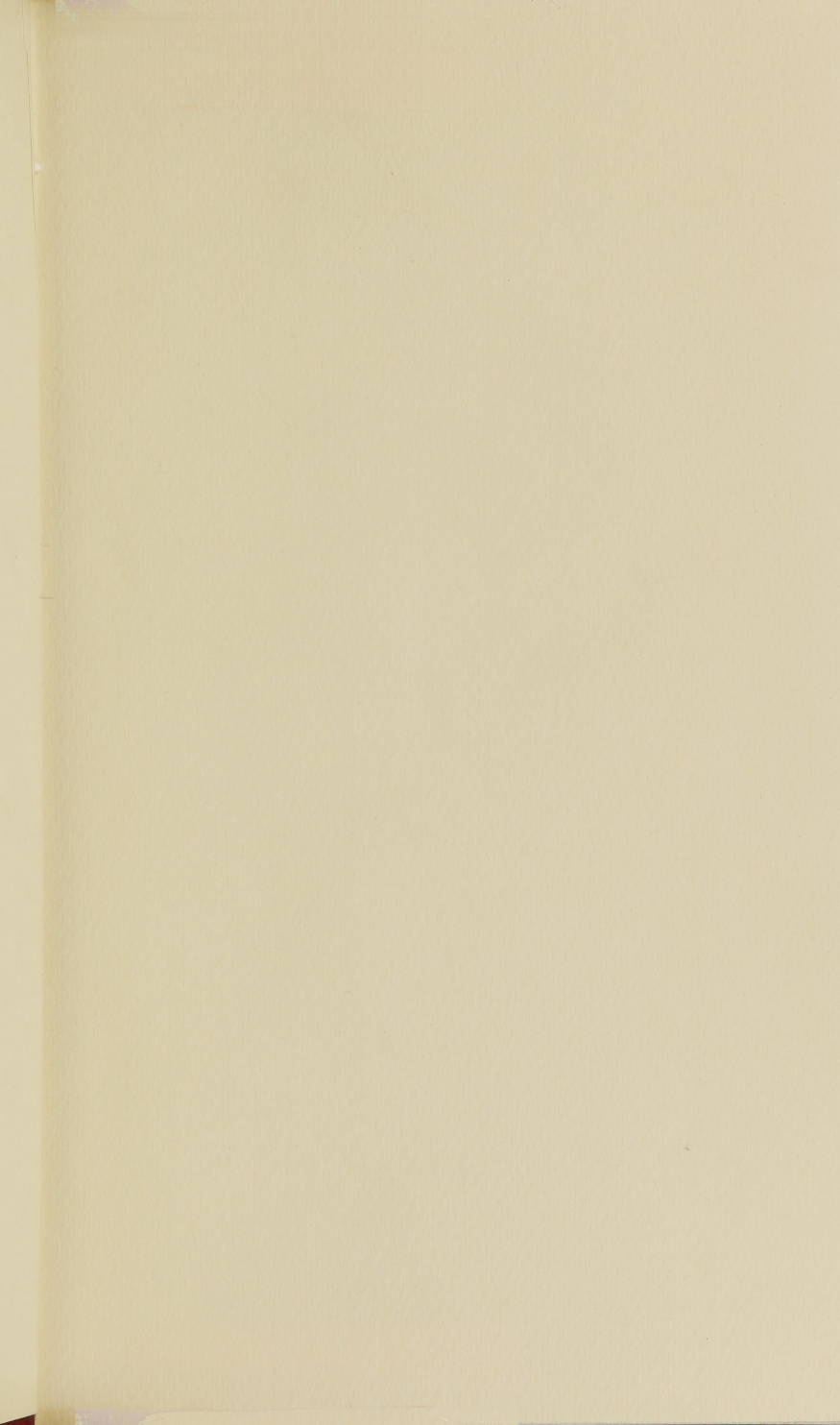


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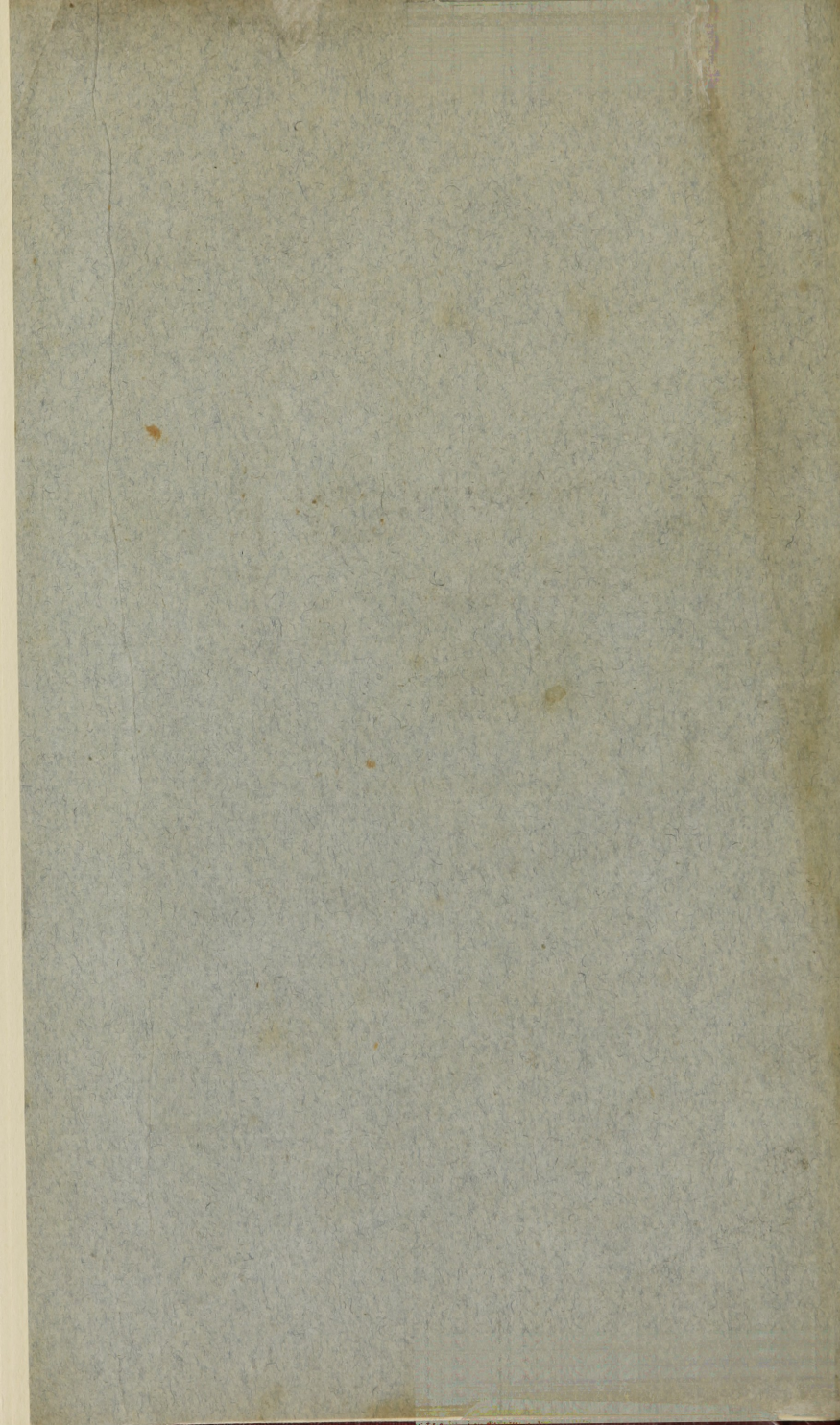


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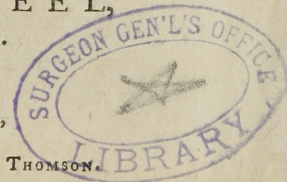
A N
INAUGURAL DISSERTATION
O N
D Y S E N T E R Y.

SUBMITTED TO THE PUBLIC EXAMINATION
OF THE
FACULTY OF PHYSIC,
UNDER THE AUTHORITY OF THE
TRUSTEES OF COLUMBIA COLLEGE,
IN THE
STATE OF NEW-YORK,
WILLIAM SAMUEL JOHNSON, LL. D. President;

FOR THE DEGREE OF
DOCTOR OF PHYSIC,
ON THE SIXTH DAY OF MAY, 1794.

BY DAVID G. ABEEL,
Citizen of the State of New-York.

The lip pale, quivering, and the beamless eye,
No more with ardour bright.—



NEW-YORK:

Printed by T. and J. SWORDS, Printers to the Faculty of Physic of
Columbia College, No. 167, William-Street.

—1794.—

INNAUGURAL DISSERTATION
ON
DYSPEPSIA

SUBMITTED TO THE PUBLIC EXAMINATION
OF THE

FACULTY OF PHYSIC

UNDER THE AUTHORITY OF THE

TRUSTEES OF COLUMBIA COLLEGE

IN THE

STATE OF NEW-YORK

WILLIAM SAMUEL JOHNSON, M.D. CANDIDATE

FOR THE DEGREE OF

DOCTOR OF PHYSIC

ON THE FIFTH DAY OF MAY, 1854.

BY DAVID C. ABRAHAM

Class of the Spring of 1854

The Trustees of Columbia College
do hereby certify that the above named
Candidate has been examined and found
qualified to receive the degree of

NEW-YORK:

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Columbia College, 1854.

T O

ISAAC ROOSEVELT, President,

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Managers of the
City Dispensary,

JOHN CHARLTON, President, {

and

THOMAS JONES, Vice-President, {

Of the Medical Society
of the State of New-
York, and ex-officio
Managers of the City
Dispensary.

T H I S

D I S S E R T A T I O N

Is respectfully inscribed,

By their most obedient,

Humble servant,

DAVID G. ABEEL.

DAVID C. ABELL

Humble fervent

By their most obedient

is respectfully informed,

D I S S E R T A T I O N

THIS

of the Medical Society
of the State of New
York, and ex-officio
Managers of the City
Dispensary.

THOMAS JONES, Vice-President,
and
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DISSERTATION

ON

DYSENTERY.

DYSENTERY is a disease to which Physicians have only of late years annexed precise and accurate ideas. Every increased discharge from the intestinal canal, of a morbid nature, and particularly if accompanied with some mixture of blood, was formerly considered by Physicians as Dysentery. HIPPOCRATES himself seems to have confounded the terms Dysentery, Diarrhoea and Lienteria, and to have applied them rather to express particular stages of the same complaint, than to have viewed them as distinct and different diseases.*

About the middle of the present century, when Physicians and Philosophers became usefully engaged in investigating

* Vide Hipp. Op. Epid. et Aph.

tigating the causes of diseases, with a view to their more effectual prevention and successful cure, the causes of dysentery were with more accuracy ascertained, as being produced by a specific contagion. Sir JOHN PRINGLE is among the first whose observations have tended to enlarge our ideas on the nature of this complaint.

Dysentery, as described by the most respectable writers in medicine,* is a disease which appears to be of only one species; and though it is sometimes accompanied with intermittent fever, with miliary eruptions, and is often attended with discharges of worms and other matters from the intestinal canal; yet these circumstances can only produce varieties of the same disease.

Doctor CULLEN has accurately defined dysentery by the following characteristic symptoms.

“Pyrexia contagiosa, dejectiones frequentes, mucosae, vel sanguinolentae, retentis plerumque faecibus alvinis, tormina, tenesmus.”†

* See Sydenham, sect. iv. chap. 3. Huxam de Aere, &c. ad. ann. 1743. Cleghorn's Disease of Minorca, chap. 5. Pringle's Disease of the Army. Monro's Disease of the Army, 1761. Zimmerman on the Dysentery, 1765.

† Culleni Synopsis Nosologiae Methodicae.

HISTORY

HISTORY OF THE DISEASE.

DYSENTERY is commonly preceded by a sense of coldness, more or less lassitude, and pains of the head, back and loins, which are afterwards followed by increased heat—These symptoms are succeeded by pains in the bowels, about the region of the naval, which have been called by the Latins tormina—These pains are accompanied with a desire of evacuating the contents of the intestines; which is sometimes effected, attended with discharges of mucus and more or less blood. After a few stools, the discharge becomes liquid and of a yellow or brown colour, with mucus, and sometimes pure blood. The feces are then discharged in nodes or hard lumps, called by authors scybala, the freeing the intestines from which commonly gives relief.

When the symptoms first come on, they are often attended with nausea and vomiting, when a matter of a green colour, and of a bilious nature, is ejected. The patient complains of great thirst and a disagreeable bitter taste. The tongue is commonly covered with a whitish or yellow scurf; sometimes it is brown, and in some cases black. The patient has seldom any appetite for food, and usually complains of great prostration of strength. In some instances the patient is very costive in the beginning of the disease, and the abdomen is swelled in consequence of its being distended with wind. As the
disease

disease increases, the patient is affected with more frequent desires of evacuating the contents of the intestines, but without producing that effect. Substances of a firm and compact texture, resembling pieces of cheese or fat, and even parts of the villous coat of the intestines, are sometimes discharged. There is also a fluid, in appearance like pus, at times evacuated. Unless purgative medicines are administered, it is rare that excrementitious matters are thrown out of the intestines.

The efforts to evacuate the contents of the intestines are accompanied with tormina, tenesmus, and much pain; the patient having a sensation as if the intestines were compressed and cut. Painful hæmorrhoidal tumours are apt to take place in those who have been previously affected with them. A prolapsus ani is also frequently produced, especially in young persons. The urine is often discharged with pain, difficulty, and a sense of heat. Food taken into the stomach is frequently ejected, without having suffered much change from the organs of digestion; and in some cases the act of deglutition has been followed by griping pains and tenesmus. The pulse is frequent, but, except in those who are very robust, rarely hard or strong.

The dysenteric and febrile symptoms are commonly increased towards evening, but remit somewhat towards morning. Before this disease proves fatal, all the symptoms become more severe. The tormina and dejections are so frequent that the patient has scarcely any intermission of pain.

pain. What is discharged from the intestines is of a very foetid nature, and frequently involuntary. The pulse, during this stage, is small and frequent; the tongue is black and dry; the thirst very great, and every symptom of debility manifests itself; such as hiccough, cold sweats, paleness of the face, coldness of the extremities, difficult deglutition, and, lastly, aphthæ in the mouth and fauces, swelling of the abdomen, involuntary discharge of fœces and urine, delirium, and a cessation of pain, are the forerunners of death. With the above described symptoms, in part or in concurrence, the disease continues an uncertain length of time. When the complaint is mild, it sometimes terminates in four or five days: when more severe, not till fourteen or fifteen days, and sometimes even later.

When the dysentery is of a mild kind, the symptoms of tormina, tenesmus, and alvine excretions are less frequent; the excretions more natural, less mixed with blood or mucus, and not of so disagreeable a smell; the appetite for food is stronger, there is less thirst, and the patient has more refreshing sleep.

In this disease, the pains which, in the beginning, occupied the whole abdomen, seem, in its advanced state, to be more circumscribed, and to be confined to the inferior part of the colon and beginning of the rectum. When the pains are very severe, it commonly happens that the small intestines are also affected, as there are a greater number of nerves distributed among them.

As dysenteries usually appear in the beginning of autumn, the fever which attends them commonly puts on a synochus or typhus form: sometimes, however, they are combined with an intermittent or remittent fever. Dysenteries have also sometimes appeared in the spring and summer, and then have had some connection with the diseases which usually prevail at those seasons of the year.

DISSECTIONS.

ON examining the bodies of those who have died of dysentery, the inferior parts of the colon and rectum have been found of a black colour, and of a putrid appearance; their coats preternaturally thickened, and the internal parts ulcerated. Red pustules, resembling those of the small-pox, have been found in the inner coats of the intestines.* Schirrous tumors have also been discovered sometimes in the colon. In almost all cases in which gangrene had not taken place to any great degree, considerable portions of the large intestines have been found affected with a preternatural constriction.†

DIAGNOSIS.

THE diseases which may be mistaken for dysentery are diarrhœa and cholera: but a little attention will enable the Physician to establish the proper diagnosis.

In

* Pringle's Diseases of the Army, p. 246.

† Cullen's First Lines, vol. ii. p. 294. par. 1077.

In diarrhœa there is no idiopathic fever, the tormina and tenesmus are less violent, and the discharges from the intestines are more natural. In dysentery the stools are more putrid, and mixed with more blood than is commonly observed in diarrhœa.

Dysentery is distinguished from cholera by less copious bilious vomitings. In cholera the stools are large, and mixed with considerable quantities of bile, but rarely any blood; there is no tenesmus, and the spasms of the muscles of the legs, which are characteristic of cholera, rarely take place in dysentery. It must also be observed, that dysentery is a contagious disease, and may be distinguished from other complaints by its prevailing as an epidemic.

CAUSES.

THESE may be divided into Remote and Proximate.

REMOTE CAUSES.

THE remote causes may be divided into two kinds:

1. Such as predispose persons to this disease; or,
2. Such as occasion or bring on the disease in those who are already predisposed.

The first are called predisponent; the second, occasional or exciting causes—These are now to be described.

PREDISPONENT

PREDISPOSING CAUSES,

PREDISPOSITION, according to Doctor Brown, is that state of the body not sufficiently disordered to produce disease; but, by verging towards it, renders a person susceptible of the operation of the occasional or exciting cause.* This state may be brought on by all those causes which induce debility of the whole system, and especially of the alimentary canal.

The causes which debilitate the whole system are usually too great fatigue, and depressing passions of the mind. These also affect the stomach and intestines, and are known to have frequently interrupted digestion, and to have induced sickness, nausea, and vomiting.

Intoxication also debilitates the system. Small quantities of spirituous liquors are known to exhilarate the spirits, and to give vigour to the system: but when taken in too great quantities, or often repeated, they diminish the nervous power, and bring on symptoms of debility.

The summer heat, by debilitating the body, also predisposes to this complaint: hence soldiers, who have been much exposed and actively employed in the summer, are usually taken with this disease towards autumn.

Cold,

Cold, applied to the body, especially at night or during sleep, may be considered as the most frequent predisponent cause of this disease.

In warm climates, and in this country in autumn, it is very common for us to observe considerable vicissitudes of heat and cold in the space of twenty-four hours. A small change in the thermometer produces a great effect on the body, when warm or previously heated: hence cold, applied to the body, appears to have different effects:

1. By debilitating the body, it predisposes to favour the operation of contagion.

2. By interrupting the determination to the surface, it causes a greater determination to the intestines; and,

3. By preventing the excretions of the various noxious humours from the body, contributes to favour putrescence in the system.

When we consider these different effects of cold in predisposing the system to the attack of this disease, we may readily conceive the reasons which have induced many Physicians to suppose cold to be the occasional or exciting cause of dysentery. When we reflect that cold, applied to the body in the winter, under certain circumstances, is the cause of catarrh, and many other diseases affecting the thorax, it may have a greater agency in producing dysentery than is at present imagined. Cold, applied to
the

the feet, is known to affect the intestines, insomuch that it is often prescribed to obviate great degrees of constipation. Cold is known to be the exciting cause of diarrhoea, and perhaps is more powerful in producing dysentery, than acting as a predisponent cause only.

Moisture, combined with heat and cold, renders the morbid operation of each the more powerful; and hence it may be considered as concurring with these in effecting a predisposition to dysentery.

In the latter part of summer or beginning of autumn, there is much moisture in the atmosphere, in consequence of the summer heat: it is then that people are much disposed to contract dysenteries, especially in fleets and armies, where the soldiers and sailors are much exposed to the vicissitudes of heat and cold, from the peculiar situation in which they are placed.

Previous diseases, by weakening the system and deranging the different functions, predispose the body also to the operation of every kind of contagion, and especially to that which produces dysentery.

These, and other causes which debilitate the system, have a manifest effect in favouring the operation of the occasional or exciting cause of dysentery, which we come next to consider.

OCCASIONAL

OCCASIONAL OR EXCITING CAUSE.

AN occasional or exciting cause is only a possible cause, and does not produce its effects unless under certain circumstances. What these circumstances are, I shall not pretend positively to determine; but they seem to be those which are marked as constituting a predisposition.

The celebrated Doctor CULLEN, after attending to the nature of dysentery, says, that "the disease is always contagious, and by the propagating of such contagion, independent of cold or other exciting causes, it becomes epidemic in camps and other places. It is therefore to be doubted, if the application of cold does ever produce the disease, unless when the specific contagion has been previously received into the body; and, upon the whole, it is probable, that a specific contagion is to be considered as always the remote cause of this disease."*

But what the nature of the contagion is that produces dysentery, does not seem to be perfectly understood; nor is it more evident what are the sources of its production.

As dysenteries are commonly combined with synochus and typhus, and sometimes with intermittent and remittent fevers, it may be doubted whether the fever accompanying dysenteries does not arise from the same causes which produce those complaints, namely, marsh or human effluvia;

* Cullen's First Lines, par. 1075.

effluvia; and whether the local affection of the intestines is not owing to a morbid determination to these parts, in consequence of the operation of cold or other causes.* It is, however, certain, that some species of contagion seem to affect certain parts of the body in a peculiar manner. Thus, the skin is affected in the small-pox and measles, the throat in the cynanche maligna, the lungs in the pertussis, and the membrana Schneideriana in the influenza: so it may be, that a contagion of a specific nature may affect the intestines in preference to any other part, though we are unacquainted with its nature or the mode of its production.

The opinion that the febrile symptoms which attend dysenteries do not constitute an original fever, or one peculiar to that disease, seems probable from this circumstance, that sometimes the fever is of an intermittent form, sometimes of a remittent, and at others of a synochus or typhus nature. We do not find these various kinds of fever in scarlatina, measles, small-pox, and other diseases which arise from a specific contagion. It has been supposed by some Physicians, that dysenteries are not produced from contagion:† this error has arisen from its being confounded with diarrhoea; and perhaps those cases of dysentery which are mentioned by Doctor CLEGHORN,‡ Sir JOHN PRINGLE,§ and others, to be combined with intermittent and remittent fevers, have only been cases of diarrhoea instead of dysentery.

Those

* Doctor Romayne's M. S. Lectures, 1791.

† Moseley on Tropical Diseases, 211.

‡ Disease of Minorca.

§ Diseases of the Army.

Those who are but little acquainted with the writings of many modern Physicians, will readily discover, that the history of dysentery is differently stated by most of them; and that this difference can only be settled by future observations.

PROXIMATE CAUSE.

BY an attention to the series of symptoms which usually attend dysenteries, it is manifest, that a considerable part of their proximate cause is connected with a febrile disease, and that this must depend on the same circumstances as the proximate cause of fevers in general, which Doctor CULLEN supposes to depend upon an atony and spasm of the extreme vessels. There is no doubt but that the symptoms of dysentery point out a diminished energy of the nervous system and a tendency to putrescence. These are marked in the languor, lassitude, state of the tongue, stomach, and the various functions of the body. But there are another series of symptoms which are peculiar to dysenteries, and upon which their proximate cause more immediately depends. These have been variously considered by Physicians.

Doctor CULLEN is of opinion "that the proximate cause of dysentery, or at least the chief part of the proximate cause, consists in a preternatural constriction of the colon, occasioning at the same time, those spasmodic efforts which are felt in severe gripings, and which efforts,

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propagated

propagated downwards, occasion there the frequent mucous stools and tenesmus.*

It is certain, that many of the symptoms which are characteristic of dysentery, are best explained upon these principles; such as the formation of the scybala, and their retention in the intestines, notwithstanding the efforts to have them ejected. The mucous commonly discharged in this disease is owing to an abrasion of the internal coats of the intestines, which are generally covered with it in considerable quantities; and it is not improbable but that in this disease, there is a morbid secretion of it. The appearance of the blood with the mucous may be readily explained, from a rupture of some of the smaller blood-vessels, and perhaps from a dilatation of their mouths. The latter of these Sir JOHN PRINGLE supposes frequently to happen. He likewise observes, that "streaks of blood" appearing among the matter voided, "denote the opening of some of the small vessels at the end of the rectum, but a more intimate mixture is a sign that the blood comes from a higher source."†

Some have supposed the proximate cause of dysentery to depend upon inflammation;‡ but inflammation is rather the natural effect of much spasmodic effort, than the cause. Hence we may consider inflammation, and its consequences, ulceration and gangrene, to be more the effects of spasm than the cause of it.

Others

* First Lines, vol. ii. par. 1078.

† Pringle's Diseases of the Army, p. 228.

‡ Andreas Mitchel's Inaug. Dissert. de Dysenteria, Edinb. 1789.

Others have supposed a redundancy of bile, and an increased acrimony of it, to be the cause of dysentery;* but, if much bile be generated in the course of dysenteries, it appears to be an effect of the operation of some of the remote causes. A morbid secretion, and perhaps an acrimony of the bile, may occasion cholera and diarrhoea; but I cannot suppose that it can produce dysentery.

Many have imputed the immediate cause of dysentery to the eating a great quantity of fruit; but this is a vulgar error. From observations now made, it is manifest that fruits have no effect in producing this disease; and ripe fruits are among the best remedies to obviate the complaint. It is a remark made by authors in general, that dysenteries appear more prevalent in those years in which there is least fruit.† From this it would appear, that they have rather a tendency to prevent the coming on of the disease.

Worms have likewise been supposed to produce this complaint, which is also a vulgar error. Living animalculæ have been supposed to produce this disease. In the *Amœnitates Academiæ*, there is a curious dissertation on this subject, where the author attempts to prove, that living small animalculæ, lodged in the intestines, are the cause of dysentery;‡ but as we have no evidence of these, we must consider the theory as merely an hypothesis, or the chimera of a fanciful imagination.

* Zimmerman on the Dysentery, ch. 2.

† Pringle's Diseases of the Army. Monro's Diseases of the Army, 318.

‡ *Amœnitates Academiæ*, vol. v. dissert. 2.

PROGNOSIS.

THE symptoms from which the probable event of dysentery can be foreseen, may be divided into those which form the febrile part of the disease, and into those which constitute the affection of the intestines.

A violent fever always portends danger, from the effect it has on the system at large; and it may cause the local affection of the intestines to terminate in gangrene. When the disease is accompanied with much debility, and want of energy in the system, as manifested in the state of the different functions, it evinces great danger; and the danger will be in proportion to the degree of debility which prevails.

A tendency to putrescence in the system, is an index of danger, especially when petechiæ, vibices, &c. appear on the surface of the body, aphthæ in the mouth and fauces, and when the tongue has a black appearance.

It can hardly be said, that dysentery is in any stage without symptoms of danger; and it is only by proper remedies, timely administered, that the disease proves to have a favourable termination.

When the heat of the body is not considerable, the thirst not great, the stools copious, and not very frequent, the skin moist, the urine natural, and no way obstructed, it is probable that the disease will end favourably, and more especially

cially if the fœces become more natural, if there is a desire for food, and if the pulse is moderate.

The symptoms arising from the affection of the intestines denoting danger, are violent tormina, a great and frequent desire of evacuating the contents of the intestines, without that effect, and an inability of receiving injections from a spasmodic affection of the rectum; and lastly, the returning of injections almost immediately in those cases where they could be received.

METHOD OF CURE.

DYSENTERY is a disease which demands the particular attention of a Physician. Nature, which, on many occasions, exerts herself to cure diseases, affords but little relief in this. In the treatment of dysentery, some indications of cure are pointed out, and which ought to be pursued, paying attention to the patient's constitution, and the season of the year in which the disease occurs. These indications we are now to note.

1. To evacuate the contents of the stomach and intestines.
2. To relieve the febrile symptoms, and to alter the determination from the intestines.
3. To support the strength of the patient, and obviate the tendency to putrescence in the system; and,
4. To diminish the irritability of the intestines, and restore their tone.

Such

Such is the importance of attending to the first indication, that many medicines, which have the power to fulfil it, have been considered by Physicians as specifics in the cure of this disease. The particular medicines we come next to consider.

In some cases, before the medicines are administered to fulfil the first indication, it may be necessary to take away eight or ten ounces of blood, which will often render the purgative and emetic medicines more safe and efficacious.* But it must be remarked, that blood-letting should be practised with caution, as the tendency of dysentery is to produce debility. Dysenteric cases occurring in the spring or beginning of summer, generally bear blood-letting better than those which occur in the fall or latter end of summer.

Ipecacuanha is a medicine well adapted for all the purposes of full vomiting, and therefore may be administered with advantage in dysenteries in their first stages. Given in small doses, it is also purgative, and may be said to favour a determination to the surface of the body. Such, indeed, have been the good effects of ipecacuanha, that it has been considered by Physicians as a specific; but from what I have just mentioned, its mode of operating must be obvious.

The

* The cases in which blood-letting appears to be particularly indicated are those in which the pulse is full, hard and strong, and where an evident inflammatory diathesis appears in the system. Sometimes, however, where the pain is violent, it will be necessary to bleed, though the pulse may be weak and contracted. Doctor Monro has observed, that in such cases the pulse, after bleeding, becomes fuller and stronger.

The chief objection to the use of ipecacuanha is, that it is very apt to operate as an emetic when given in small doses, and by that means prevent our obtaining its purgative effects, which are most required to evacuate the contents of the intestines.

The preparations of antimony are now preferred to every other medicine in the cure of this disease; and of the various preparations in the dispensatories, the tartar-emetic must be preferred. In tartar-emetic, the antimony is combined with an acid which renders its operation more certain and active, when taken into the stomach, and when it passes into the intestines, more effectually purgative: for this reason it is the preparation in most common use.

Tartar-emetic may be given in such doses as to effect full vomiting when requisite, or it may be administered in doses so as to prove cathartic. When the tartar-emetic is intended to act as an emetic, it should be given in large doses, and at short intervals: when it is intended to act as a purgative, it should be given at long intervals, and in small doses. This medicine, besides the effects just mentioned, relaxes the system, and determines to the surface of the body: hence it relieves the febrile disposition, and on this account, it is a medicine of great efficacy in the cure of this complaint, as has been justly observed by the celebrated Monsieur SENAC, physician to the armies of France in the reign of Louis the fifteenth.

The other antimonial medicines which are given in dysentery, are those in which the reguline parts are uncombined

combined with an acid, as in the James's powder, and glass of antimony. The James's powder proves more certainly purgative, and determines more to the skin than the tartar-emetic, as is evident from the nature and operation of the medicine. The glass of antimony has been commonly employed, combined with wax; but this is a useless addition, for the activity and value of the medicine depend on its meeting with an acid in the stomach, and there forming a kind of tartar-emetic: but as this is the worst preparation of antimony, it is now seldom employed.

When emetic medicines are given, small quantities of an infusion of camomile flowers should be drank occasionally after the vomiting has been produced, to prevent painful spasmodic affections of the stomach.

The next class of medicines which may be used to evacuate the contents of the intestines, and which we now come to notice, are those called more strictly purgative. Of these, the neutral salts are those most commonly employed, such as Glauber's salts, Epsom's salts, and crystals of tartar. The salts should be dissolved in a sufficient quantity of water, and given in divided doses, until free discharges are produced. The salts may also be combined with some other medicines. Doctor MONRO highly recommends a combination of salts, manna and oil;* but the most useful combination to the two first of these medicines is that of an antimonial: thus, Glauber's salts, manna and tartar-emetic, combined in solution, make a convenient and

* Monro's Diseases of the Army.

and efficacious mixture, which may be given in divided doses, until the patient have free discharges, and is relieved from the tormina or griping pains.

Castor oil,* tamarinds in decoction, and medicines of this nature, have also been used with success.† Rheubarb, jalap and aloes are the least proper purgatives: when given in powder, they are apt to produce too great irritation; combined with spirits, in the form of tinctures, they are equally objectionable: for these reasons they are not used by the most skilful practitioners at the present day.

Under the head of purgatives, must also be considered injections thrown into the intestines. Animal broths, mild mucilaginous mixtures of starch or gum-arabic, are the most proper: these should be injected in considerable quantities, with the occasional addition of castor or common oil; and when there is much pain, injections may be used combined with laudanum, or a solution of opium.‡ These are also highly proper to relieve the tenesmus, which is often one of the most troublesome symptoms. Anodyne injections have likewise a good effect in preventing the prolapsus ani; but when this occurs, it should be remedied by astringent applications, combined with something of an anodyne nature. When the topical affection is very great, and there appears

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danger

* Castor oil is frequently nauseous to patients, and will sometimes occasion vomiting; to prevent which, a small quantity of spirits of lavender may be added.

† Under this head must be referred mutton suet and animal broths, which have all a laxative effect.

‡ In throwing in injections, great care should be taken that it be done in a gradual and easy manner, for, if not, they may have a tendency to increase the irritability of the parts, and consequently the disease.

danger of gangrene, injections of the infusion or decoction of the Peruvian bark, finely filtered, should be used every three or four hours, or according as the case may require.

The effects of the medicines which we have just mentioned, are commonly such as not only relieve the topical complaints of the stomach and intestines, and evacuate their contents, but also diminish very much the febrile symptoms; for this reason they should be occasionally continued throughout the treatment of the disease.

The second indication of cure which I have given, and to which we shall now attend, is that of relieving the febrile symptoms and altering the determination from the intestines.

The febrile symptoms are to be treated according to their nature, as they are attended with more or less excitement in the system. In most cases it will be requisite to employ the antiphlogistic regimen, excepting the application of cold, which, by obstructing the determination to the surface of the body, may be injurious. The tension of the arterial system may be much diminished by those means mentioned to fulfil the first indication; and as part of the proximate cause of the disease is that of the fever, antimonial and other remedies which are disposed to determine to the surface, should be employed as circumstances may direct.

In the course of the fever, when the intestines have been fully discharged, it may, in many cases, be necessary to attend more particularly to the cure of the disease, when stimulants

mulants and tonics may be used, such as good wine and the best Peruvian bark. Wine may be given in any form that may be agreeable to the patient; but it requires some circumspection in administering the bark, which ought never to be given in substance where the stomach or intestines are diseased, as the powdered bark, however finely prepared, may produce irritation from its mechanical action. The most proper preparation of the bark is the cold infusion, made with magnesia, and finely filtered.

In those cases of dysentery in which the fever puts on a remittent or intermittent form, it is very necessary to be more free in the use of the infusion of the bark, to prevent the return of the paroxysm.* Where his treatment has been pursued, the good effects which have resulted justify its propriety.

The tendency of fevers, in dysentery, to those of a typhus nature, and the tendency of the system to putrescence, are to be obviated by due attention to cleanliness, as changing frequently the bed-clothes and body-linen of the sick. The air of the patient's apartment should be particularly attended to; free ventilation should be used, and if this cannot be properly performed, branches of trees or shrubs may be placed in the room during the day with good effect, as they absorb the mephitic air and emit what is pure. The air of the apartment may likewise be rendered purer, or at least more agreeable, by having the floor sprinkled with vinegar, or having different aromatic substances burnt in the room. Great care

* Cleghorn's Diseases of Minorca, and Lind on those of Warm Climates.

care should be taken that all excrementitious matters be removed as soon as possible, for they are the chief source of the impurity of the air.

Determining to the surface of the body in fevers, is well calculated to take off the spasm from the extreme vessels, which constitutes a part of their proximate cause. But, in the cure of dysentery, it is of very great consequence to relieve the local affection of the intestines. For this purpose, the surface of the body should be kept warm when antimonial medicines are administered, to cause them to determine to the surface, while at the same time they may evacuate the contents of the stomach and intestines. Small doses of laudanum may be added to the antimonial medicines after proper evacuations, to favour their operation in determining to the surface. Upon the same principle, blistering and warm bathing or fomentations to the abdomen, may be employed, especially when the local affection is any way considerable, and attended with violent pain. Doctor MOSELEY, in his *Treatise on Tropical Diseases and on the Climate of the West-Indies*, fully illustrates this practice;* and other writers of eminence justify the same opinion, which, indeed, seems consonant to reason and the nature of the disease.

The third indication which I have mentioned, and to which we come now to pay our attention, is to support the strength of the patient, and obviate the tendency to putrescence in the system.

Contagious

* Page 193, &c.

Contagious diseases of all kinds have a great effect on the nervous system, in inducing a state of debility; but this is particularly the case with that which produces dysentery: therefore, such medicine and diet should be administered, as may best tend to obviate the effects of the contagion. Wine, in proper quantities, good animal broths, and the Peruvian bark, are best calculated for this purpose. When broth is employed, care should be taken that all the fat is removed. Salep and sago may also be given, according to circumstances: they form, with water, a pleasant mucilaginous drink, well adapted to persons labouring under this complaint. Ripe fruits of all kinds, but especially those of a sub-acid nature, may likewise be given: they have been known to be of great service in obstinate cases of the disease, where other remedies had been used without success.*

It is unnecessary to repeat the directions already proposed to obviate the tendency to putrescence in this complaint, as the means have been mentioned in the treatment requisite to relieve the febrile symptoms.

The fourth and last indication which I have given, and which we come now to consider, is that of diminishing the irritability of the intestines, and restoring their tone.

Every part of the human body becomes much more irritable when inflamed; and this is especially the case in the

* Zimmerman on Dysentery. Pringle's Diseases of the Army. Monro's Diseases of the Army.

the intestines, where there are a considerable number of nervous papillæ. To obviate an irritable state of the intestines, is of much consequence in the cure of dysentery.

To obtain this object, we make use of mucilaginous and anodyne medicines.

Gum tragacanth, in the form of mucilage, is said to allay the irritation of the intestines; but perhaps it does it only in an indirect way, namely, by sheathing the coats of the intestines, and preventing their being irritated by the acrimony which is frequently generated in them. Gum-arabic, starch, and flour long boiled and formed into mucilages, have the same good effect. But the most useful medicines for this purpose, are opiates, given in some form or other; sometimes combined with aromatics and astringents, and at other times not. The forms in which it is combined with aromatics, are the theriacs of the dispensatories: those in which astringents are combined, are the compound powder of bole, and the species aromaticæ, &c. These preparations have at times good effects; but in the beginning of the disease care ought to be taken not to administer medicines which will counteract the full discharge from the intestines; and therefore, when opiates are employed internally, they are safest when combined with ipecacuanha or tartar-emetic. In this way their bad effects on the different secretions are prevented. They may be also combined with calomel.

Opiates

Opiates may also be employed externally, either in the form of a plaister to the abdomen, or in fomentations. For this last purpose, the heads of poppy may be used to make a strong decoction, and this decoction applied in the form of a fomentation, three or four times a day, to the abdomen, for the space of one or two hours.

A temperate atmosphere should always be obtained if possible; cold should be avoided, as it is apt to cause a continuance of the disease, from its producing a determination to the intestines, and often counteracting the most powerful remedies which can be employed. The patient's cloathing must be of a warm kind; perhaps wearing flannel next to the skin would be the best means of keeping up a constant determination to the surface of the body, and of preventing, in a great measure, the bad effects which might arise from any sudden vicissitude of weather to which the patient may be exposed.

Astringent and anodyne medicines may also be used to restrain the discharges from the intestines. The confectio japonica of the New Edinburgh Dispensatory, is a very proper and useful composition, as it contains some of the more powerful astringents combined with aromatics, as the gum kino and succus japonicus. The cortex granatorum, querci, lignum campechence and its extract, rad. Columb. alumen, and other astringents, may be also used with advantage. The simarouba bark has likewise been considered as very efficacious, and has been used by several physicians; but others consider it of very little efficacy; though it is
said

said to have succeeded in some very obstinate cases, where more powerful astringents had failed.

It only remains for me now to mention the means to be employed by convalescents after the disease, and the means to prevent the spreading of the contagion. With regard to the first, due attention should be paid to regimen, diet and exercise; and with respect to the second, the most proper means to obviate the effects of the contagion, is to avoid those causes which we have marked as predisposing the habit to this complaint, and to avoid the occasional or exciting cause.

The limits to which a dissertation of this kind is usually confined, forbid my enlarging further on the subject.



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